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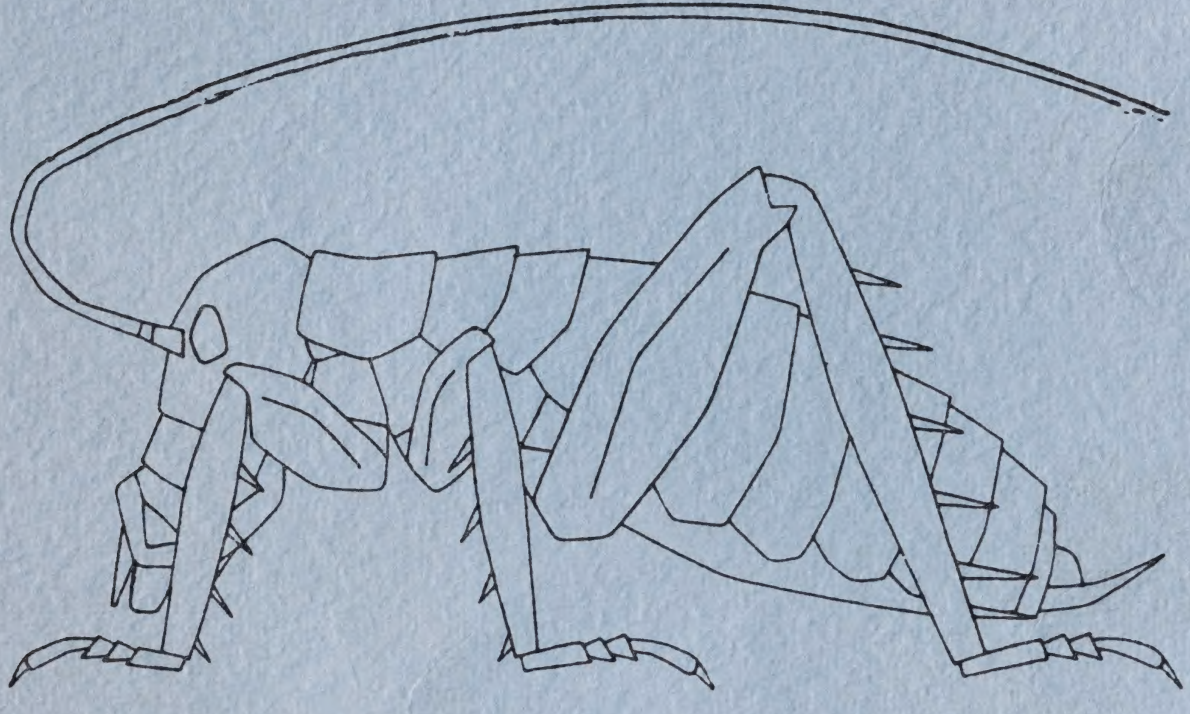

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DEADLINE FOR COPY FOR NEXT WETA

30 March 1991

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BIOLOGICAL SCIENCES

In my conference address at Lincoln I expressed some concern at the inability of the Royal Society to effectively represent member bodies concerns to Government, and put forward a unified perspective on science issues. Specifically I suggested the need for an organisation focusing on the biological sciences. Such an organisation could arise from membership of individual biologists, as with the Australian Institute of Biology acting as a professional association, or from a council with representation from individual societies.

I would be pleased to hear your views on the broad principles of this proposal. I am prepared to take the next step and seek the views of other societies but only if there is general support for the idea within our own executive and membership.

Many of the issues of concern to biologists today are common to a wide range of disciplines, directly affect members of more than one society and are amenable to joint representation. It seems to me if we could speak with one voice on such issues we would stand a much better chance of being heard.

An umbrella organisation could also seek to foster greater interaction between individual societies, coordinate their activities where appropriate, and focus their attention on issues where representation to Government is vital.

Your views would be greatly appreciated.

Gordon Hosking
PRESIDENT

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THE WETA, 1990

Now that *THE WETA* is growing up, it might be timely to pause and reflect upon its development. Sixteen years or so ago, the late Ken Fox, one of the society's best known amateurs, suggested that the well established *NZ ENTOMOLOGIST* was too formal a publication for some and that amateurs may feel inhibited by its very formality as an internationally recognised scientific journal. He suggested a "Scientific Newsletter" as a medium for the society's many amateurs (and professionals) to record interesting observations without too much formality. And so the "Newsletter" emerged as a cyclostyled sheet for a couple of years and died. Typing on to stencils made it impossible to proof read and this coupled with the time involved, soon put it way down on the list of priorities.

A year or so later, a conversation at a Ent. Soc. conference revived the idea. Graeme Ramsay came up with the title, *THE WETA* and the newsletter came to life again. It continued to be cyclostyled for a couple of years, but, with primitive reproduction equipment, could hardly be described as one of the world's leading publications. It did, however, serve a purpose and was well supported. Imagine the surprise of the Editor when it was even cited in British abstracting journals! It was this mention that suggested to the Editor that it was time for metamorphosis and a budget was set side at the annual conference for a printed *WETA*. Dave Helmore, provided a stylised drawing of a weta for the front cover and the format was changed from A4 to A5. It looked much better.

Authors were asked to provide camera ready copy and this resulted in a mixture of type styles and layouts - the Editor just did not have the time to re-type manuscripts to ensure a uniform type face. But this was not important: the principal function of *THE WETA* was to provide a medium whereby every member could publish his or her observations and notes. Nothing has changed and it does not matter if an author does not use standard procedure for recording information. So long as the meaning is clear and the information reasonably accurate, who cares if the layout contravenes accepted standards?

Now, with the advent of desktop publishing, and the Editor's desire to play with new toys, it has been possible to improve *THE WETA* still further. *THE WETA* will continue to accept camera ready copy, because that saves the Editor a lot of work. The magazine has not changed from its basic objectives and the Editor will continue to liaise closely with the Editor of the *NZ ENTOMOLOGIST*, because, for various reasons, a contribution sent to one may be more appropriate in the other. Publication of an article in *THE WETA* does not preclude

publication in another scientific journal, even though abstracts may appear in the CAB abstracting journals.

John Tenquist
Editor.

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IN SEARCH OF *PRAOLEPRA ALBOPICTUS* BROUN (CURCULIONIDAE)

Brenda May
Plant Protection Division, DSIR Auckland

Praolepra albopictus is a rather small weevil, 2.5 mm long with distinctive white-speckled markings. It is one of about 100 native species collectively known as the flower weevils (Curculionidae). It is listed in Hudson (1934), one specimen having been discovered by Broun at Parua Bay around 1880. Since then, only six additional specimens have been found; two from Green Bay, Auckland in 1915; the others more recently, from kauri forest in Northland.

For several years now, the search for further specimens and for the host plant of *P. albopictus* has been a spare time and holiday project for the weevil enthusiasts at Mt Albert Research Centre. General collecting methods do not provide much information about individual insects but the field was narrowed when, in 1985, Robin Craw dislodged two specimens from a vertical roadside bank in Waipoua Forest. The next step was to make a list of the plants growing on that bank and immediately above it. This was done in December 1989. The fern *Blechnum capense* was most common but was quickly eliminated as a possibility. The climbing rata *Metrosideros perforata*, present in its juvenile form, was another contender which failed to produce. But, there were also two well-grown seedlings of Kirk's daisy *(Brachyglottis kirkii)*. The plant is well scattered through the bush and by beating this one species in the forest above the bank, 14 *P. albopictus* were obtained. Hot on the scent, we investigated the Yakas track at the further end of Waipoua, travelled through Marlborough State Forest where Kirk's daisy grows in *Weinmania* - dominant bush, then north to Omapere where it is abundant in scrubland with takekaha *(Phyllocladus trichomanoides)* and *Coprosma spathulata*. Twenty three specimens came to the beating sheet from these places. Then, back home at Huia, in regenerating bush, a further five specimens were obtained, all from *B. kirkii*.

Biology: The adults of *P. albopictus* when seen *in situ*, were sheltering under leaves, always singly, and were not obviously feeding. However, they fed happily enough on young leaves in a vial, leaving the circular pits typical of the group. Several couples mated but no sign of oviposition or of larval activity was discovered despite close inspection of leaves, stems, buds, flowers and seed-heads.

So, the adult food plant has now been discovered but two questions remain: 1. Are the weevils distributed as widely as *B. kirkii*. i.e., throughout the North island? and 2, where do the larvae live and pupate?

REFERENCE

Hudson, G.F.; 1934: New Zealand beetles and their larvae. Ferguson and Osborn Ltd. Wellington. 236 p.

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PHAULACRIDIUM MARGINALE (WALKER) (ACRIDIDAE) PARASITISED BY A GORDIAN WORM (NEMATOMORPHA: GORDIOIDA).

A note

A.C. Harris
Otago Museum, Great King St.
Dunedin

On 10 April, 1990, Malcolm Foord collected five specimens of *Phaulacridium marginale* in grassland at Piano Flat, about 25 Km North east of Waikaia. These were placed in a vial. Shortly, a 112 mm long, pale straw-coloured gordian worm issued from one of them.

In my experience, insect hosts for gordian worms in New Zealand are carabid beetles and wetas. This is the first time I have seen one from a grasshopper and consequently it seems desirable to place this association on record. The specimens are lodged in the Otago Museum, Dunedin.

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A SIMPLE STANDARD SIZE LABEL GAUGE WITH STRAIGHT-WRITE FEATURE FOR INSECT CURATION.

E H A Oliver
Plant Protection Group
MAF Technology, Ruakura

This paper describes a simply made device which standardises the size of labels and assists with standard height writing in straight lines on hand written labels.

Two sizes of labels are usually used in any one insect collection: locality labels and determination labels. In this case, the to label sizes chosen are 10 mm x 15 mm and 10 mm x 20 mm.

Two pieces of 22 gauge steel are required (11 mm x 31 mm and 11 mm x 35 mm). Each of these is drilled at the centre to receive a wood screw which will attach it to a 50 mm length of 12 mm dowel which will be the handle (see figure). The 11 mm ends of the pieces of steel are placed in a vice and 5 hack saw cuts are made at 2 mm centres, starting 1.5 mm from the edge of the steel. The cuts should be 1.5 to 2 mm deep. The teeth between the cuts are then sharpened with a round needle file, working at a 45° angle from both sides until the teeth are 'pin sharp'.

The steel is then bent at right angles 8 mm from the comb so that they are parallel and the same distance apart as the required label length. The metal is then screwed on to the handle.

METHOD OF USE

Good quality label paper with a high fibre content should be used (Walker and Crosby, 1979). This is placed in a pine or teflon board and the two combs pressed down onto it making two rows of six holes. These holes act as a guide for writing in straight lines. When a standard label with some print on it is used, the first point of both combs should be lined up with the print and the device is rocked over to make the other holes. After writing, scissors are used to cut first, the top and bottom of the label along the line of the uppermost and lowest holes respectively, then two cuts along the lines of the row of holes provide the standard size label.

Note: Where labels are to be used in ethanol, they are rolled around a pencil before insertion into the vial, thus the label attaches itself to the side and is not

obscured by the specimens. Specimens are also undamaged by labels acting as a battering ram when vials have to travel through post etc.

REFERENCE

Walker, A.K.; Crosby, T.K. 1979: The preparation and curation of insects. DSIR Information Series 130.

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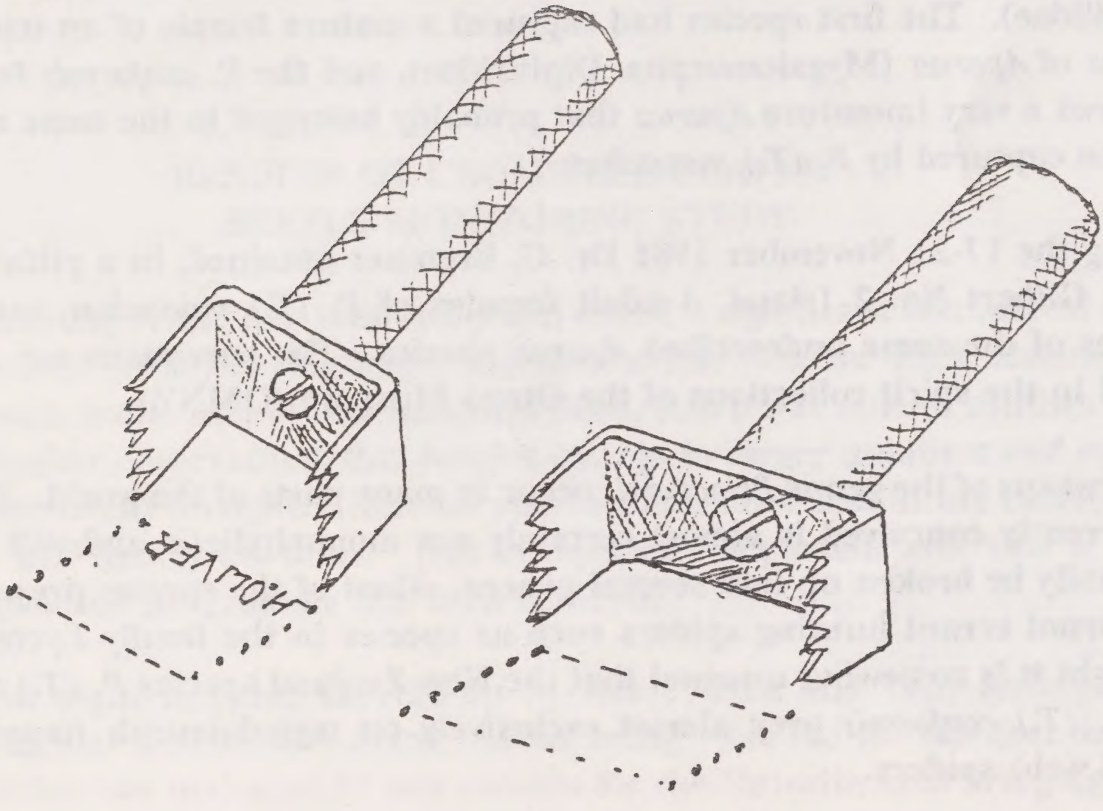

Figure 1

PRIOCNEMIS (TRICHOCURGUS) MONACHUS AND *PRIOCNEMIS (T.) CONFORMIS* (HYMENOPTERA: POMPILIDAE) PREYING ON AN UNDESCRIBED *APARUA* SPECIES (MYGALOMORPHA: DIPLURIDAE) ON OUTER GILBERT NO.2 ISLAND IN BREAKSEA SOUND, FIORDLAND.

A.C. Harris
Otago Museum, Great King St.
Dunedin

In January 1982, a Fiordland Park Board employee gave me two spider hunting wasps and two spiders that the wasps had each caught on Outer Gilbert Number 2 Island at the mouth of Breaksea Sound, Fiordland. These were *Priocnemis (Trichocurgus) monachus* (Smith) and *P. (T.) conformis* Smith (Hymenoptera: Pompilidae). The first species had captured a mature female of an undescribed species of *Aparua* (Mygalomorpha: Dipluridae), and the *P. conformis* female had captured a very immature *Aparua* that probably belonged to the same species as the one captured by *P. (T.) monachus*.

During the 17-21 November 1985 Dr. G. Bremner obtained, in a pitfall trap on Outer Gilbert No. 2 Island, 4 adult females of *P. (T.) monachus* and 4 adult females of the same undescribed *Aparua* species. The specimens are currently lodged in the spirit collections of the Otago Museum (OMNZ).

Spiderwasps of the genus *Priocnemis* occur in many parts of the world. The genus as currently conceived is almost certainly not monophylletic and will probably eventually be broken up into several genera. Most of the species prey generally on diurnal errant hunting spiders such as species in the family Lycosidae. In this light it is somewhat unusual that the New Zealand species *P. (T.) monachus* and *P. (T.) conformis* prey almost exclusively on mygalomorph (trapdoor and tunnel web) spiders.

Priocnemis (T.) monachus, New Zealand's largest species of spiderwasp, typically takes large spiders. These may be mature in the case of smaller species of *Hexathele* and *Cantuaria*, and immature in the case of *Porrhothele antipodiana*. *P. (T.) conformis* is a medium-sized spiderwasp and always preys on much smaller usually very immature spiders, frequently of the same species that *P. (T.) monachus* is taking in the same habitat.

Spiders of the genus *Aparua* live in open-mouth burrows, typically on the forest floor. This enables them to be readily parasitised by *P. (T.) monachus* and

conformis, which cannot remove from their burrows mygalomorph species that have a lid at the burrow entrance. (Overseas pompilid wasps that prey on trapdoor spiders that have a lid at the mouth of the burrow often have a modification to the head that enables them to open the lid. This modification is not present in any New Zealand pompilid.) Forster (1968, p. 135) records that the holotype of *Aparua hapua* Forster was a mature female taken on the Summit Tract of Little Barrier Island by E. G. Turbott, where it was in the possession of a "black wasp". This would almost certainly have been *P. (T.) monachus*.

REFERENCE

Forster, R. R. in Forster, R. R. and Wilton, C. L. 1968. This spiders of New Zealand, Part 2. Ctenizidae, Dipluridae and Migidae. Otago Museum Bulletin No. 2.

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RESULTS OF CROMWELL CHAFER BEETLE MONITORING STUDY

Helen Armstrong re-did her 1986 study and found a significant increase in adult beetle numbers (70%), during late September to late October 1989, although in one quadrant, beetle numbers actually declined. Helen was able to confirm from early September observations that beetles emerge in larger numbers and earlier than was previously thought. Helen has also recommended that future monitoring take place at 3 yearly intervals. This is especially important now that a large scale revegetation programme has been achieved.

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Several night trapping expeditions by Kees, Brian and Tony have yielded some spectacular results with many species being recorded for the first time in 70 years. Brian has managed 23 new records for the Dunedin area bringing total species of moths to 683. There are now only 20 recorded species not yet found.

A METHOD FOR REMOVING MOULD FROM FRAGILE INSECT SPECIMENS

A.C. Harris
Otago Museum
Great King Street
Dunedin

The following method will remove mould (especially clumps of fungal hyphae) in a matter of minutes from insect specimens.

Pour sufficient boiling water on loose crystals of chemically pure phenol to dissolve them, producing a milky fluid. Dip a fine artist's water-colour paint brush into the fluid and then apply to tip to the mould on the insect. The mould shrivels, dissolves and disappears in seconds.

To ensure that as little of the phenol solution as possible comes in contact with the specimen, a binocular microscope should be used.

Immediately the mould has disappeared from the specimen,place it in ethanol for a few minutes and gently stir to remove any traces of phenol.

In November 1989, a friend captured a specimen of *Hele megalyboides* Brunetti (Acroceridae) that had been feeding on *Helichrysum* flowers. A specimen of the plant was placed in a specimen tube along with the insect and then forgotten.

I obtained the tube and its mouldy contents on 12 June 1990. Although there are 36 specimens of this species in the Otago Museum's collection, the flower association was thought to be useful, and I cleaned the specimen of mould, with the above method, in less than two minutes. I have since treated other fragile specimens in this way, with equally good results.

Because this method has worked in cases where more usual treatments (such as soaking the specimen in a 1:10 solution of glacial phenol and benzene)have not, it seems worth placing on record.

Note: extreme caution should be used when handling concentrated phenol solution because it attacks protein and can cause sevère burns on human skin.

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THE LEPIDOPTERA OF THE CROMWELL CHAFER NATURE RESERVE

B H Patrick
Dept. of Conservation
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The Cromwell Chafer Nature Reserve was gazetted in 1984 to primarily protect the last habitat of *Prodontria lewisi*. The 81 hectare reserve additionally protects the distinctive sandy soils and characteristic native flora and fauna of this part of Central Otago. As a result of many visits to the reserve over the past decade I have recorded the following 25 species of Lepidoptera, most of which breed in the reserve on the limited number of native plant species and habitats available.

The moth fauna is typical of open, well drained parts of the Upper Clutha Valley containing an undescribed species of *Dichromodes* that was first found on the reserve but has since been found in several other terrace localities on the Upper Clutha River. Three species are represented that only occur in Central Otago and in the Mackenzie Basin areas. These are *Eurythecta zelaea, Eudonia gyrotoma* and *Paranotoreas fulva*. Otherwise the moth fauna consist of widespread species of open waste ground reflecting the disturbed and weedy nature of the Cromwell Chafer Nature Reserve.

This list of species containing not only common and widespread species but species restricted to the driest and most inland part of New Zealand underlines the immense value of this reserve to conservation.

ANNOTATED LEPIDOPTERA LIST:

Gelechiidae

Kiwaia thyaula — Common September-October in open areas of moss.

Tortricidae

Epiphyas posvittana (Walker) — widespread on shrubs and weeds on waste ground.

Capua semiferana (Walker) — Widespread in dry open areas.

Eurythecta zelaea Meyrick — Diurnal species of dry open areas, female brachypterous.

Merophyas leucaniana (Walker) — Widespread on herbs in open areas.

Pyralidae	
Crocydopora cinigerella (Walker)	Characteristic of open, depleted, dry grass.
Crambidae	
Eudonia gyrotoma (Meyrick)	Only Central Otago and Mackenzie Basin, open areas, October-December, very common here.
Orocrambus lewisi Gaskin	Widespread, larvae in *Poa cita*.
Orocrambus cyclopicus (Meyrick)	Widespread species, typical of dry grasslands.
Tawhitia pentadactyla (Zeller)	Characteristic of depleted, dry areas.
Scoparia exilis (Knaggs)	Characteristic of depleted, dry areas.
Geometridae	
Dichromodes New species	Distinct species discovered here. Also occurs at Pisa Saline area, near Luggate and Sandy Point. Dry open terraces of Upper Clutha.
Helastia christinae Craw	Only in Central Otago and MacKenzie Basin.
Helastia corcularia (Guenee)	Widespread in open, dry places.
Paranotoreas brephosata (Walker)	Diurnal species of open areas, coastal - alpine.
Pseudocoremia melinata (F&R)	local species but widespread, larvae on *Carmichaelia*.
Scopula rubaria (Doubleday)	Common diurnal species typical of open, dry sites. Larvae on *Plantago*.
Paranotoreas fulva (Hudson)	Restricted to Central Otago saline areas and rare in MacKenzie Basin. Larvae probably polyphagus but known to feed on *Atriplex*.
Noctuidae	
Aletia sistens (Guenee)	Characteristic of dry, open areas, larvae on *Poa cita*.
Aletia moderata (Walker)	Larvae on *Raoulia* spp., common in open areas.
Euxoa admirationis (Guenee)	Typical of dry, open areas.
Heliothis armigera conferta Walker	Diurnal species of weedy areas, larvae on *Vittidinia* spp.

Nymphalidae	
Bassaris gonerilla (F)	Red admiral butterfly, vagrant.
Cynthia kershawi McCoy	Painted lady butterfly, vagrant.
Lycaenidae	
Zizina oxleyi F&F	Southern blue butterfly.

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SUB-FOSSIL REMAINS OF *Mecodema costella* (COLEOPTERA: CARABIDAE)

J I Townsend
30B The Avenue
LEVIN

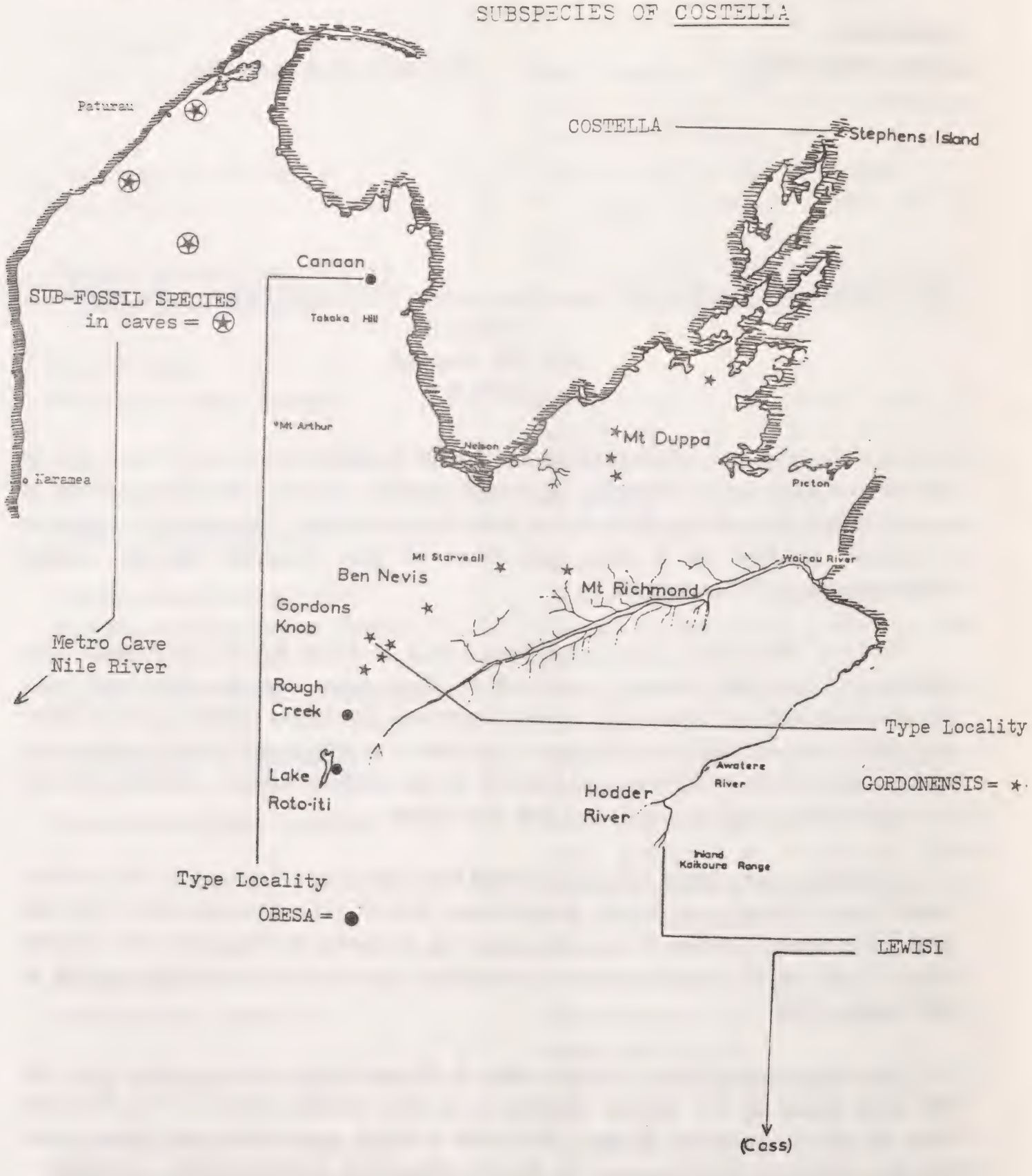
Occasionally, remains of Carabidae are found in limestone caves. These can be categorised into dead examples of extant species and sub-fossil fragments of species which have never been found alive in the district. This latter category is of special interest as it may give clues to past climatic changes and/or relationships to living species.

In 1965, *Mecodema gordonensis* Broun and *M. lewisi* Broun were made sub-species of *M. costella* Broun. A new sub-species, *obesa*, was also described from Takaka Hill, Nelson (Townsend, 1965). These are all closely related to each other and occur allopatrically, *costella* being restricted to Stephens Island, *gordonensis* to the eastern hills of Nelson and *lewisi* from the Hodder River, a tributary of the Awatere River, ranging south to Cass (see map).

In 1961, a very large *Mecodema* head was found in a dry upper level of Wet Neck Cave at Paturau in North West Nelson (4.6.61 JIT). Because of its size and weak post ocular groove, it was diagnosed as probably belonging to the *costella* group. However, the closest known sub-species was *obesa* from Canaan, north of the Takaka Hill.

Recently (last Easter, 15.4.90), almost 30 years later, the missing evidence has been found by Mr Trevor Worthy, in a cave further south of the Paturau river at the Turimawiwi River. This time a head, pronotum and elytra were found, confirming its placement in the *costella* group. Unfortunately, genitalia

DISTRIBUTIONAL RELATIONSHIP OF SUB-FOSSIL SPECIES TO OTHER SUBSPECIES OF COSTELLA



were missing so its precise relationship cannot be determined; it probably represents another sub-species.

This carabid is the largest known form New Zealand and with an eye width of 11 mm, thorax of 13 mm, and body length of about 45 mm (estimated from assemblage of pieces). The elytra do not appear to be in proportion to the head and thorax, being somewhat smaller (especially in maximum width of only 14.5 mm). This gives the beetle a parallel sided appearance similar to *costella* from Stephens Island, except the pronotum is distinctly parallel sided too, not trapezoidal as in that sub-species.

Other remains possibly of the same sub-species, have been found in the Metro Cave south of Charleston (27.10.63. JIT) and Burt Bush Cave, Quartz Range, Aorere Valley (2.4.88 I R Millar), so it may once have been quite widespread in the Northwestern part of the South Island.

Acknowledgements
I would like to thank Mr T H Worthy and Mr I R Millar for the opportunity to examine the latest finds.

Reference

Townsend, J. I. 1965: Notes on the Genus *Mecodema* (Coleoptera: Carabidae) with descriptions of new species from the South Island of New Zealand. *N.Z. Journal Science* 8 (3) 301-18

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AN AUSTRALIAN CRICKET NEWLY ESTABLISHED AT AUCKLAND

The Australian mogoplistine cricket, *Ornebius aperta* Otte & Alexander 1983, is established at Auckland. It is a small, soft delicate species approximately 8 mm long and covered in scales like a lepidopteran, except for the wings. It is easily distinguished from the other crickets reported in New Zealand by its outline, which is broadest in the region of the wings, and tapers toward the head and the tip of the abdomen; by its colour which is dull rusty brown with a conspicuous dark traverse band across the posterior border of the wings; by its characteristic song, and by its preference for shrubs and foliage. The other New Zealand crickets are mostly black or black-patterned, more or less parallel-sided in outline, and are mostly inhabitants of grassland and pasture.

The Auckland population is either a new introduction or an extension of the *Ornebius* population established at Paihia for at least 13 years.

The song is soft and penetrating and consists of several long, slow, steady chirps with regular breaks between, and then a pause before the song recommences. This cricket is a consummate ventriloquist and the singer can never be located. It was first heard during April 1989 and again at various places in Auckland during the summer and autumn of 1990, but it was not until May 1990 that by a fortunate chance, a single adult male was captured by Mrs G. Sharp at her home, 7 La Veta Avenue, Mt Albert.

The distribution of this species may be much wider than is known at present. The only practical way of establishing the presence of this cricket is by recognising the distinctive song, which easily goes unheard. So it would be worth pausing on warm summer and autumn evenings to hear whether a new, quiet cricket song is present amongst the other sounds. The song always comes from shrubs and foliage and, as mentioned before, it will be virtually impossible to locate the singer.

G.W. Ramsay
DSIR Plant Protection
Private Bag
AUCKLAND

NEWS FROM AUSTRALIA

The Australian Entomological Society held its 25th birthday celebrations at its Annual Conference in Canberra in July this year with an all time record attendance of 334, over a 100 more than the previous maximum. President Tim New, from La Trobe University of Melbourne gave his swan-song Presidential Address in insect conservation before handing over to the incoming President, Dinah Hales of Macquarie University in Sydney.

A special symposium at the Conference was on "Future Directions in Australian Insect Systematics" and this included workshops sponsored by the Bureau of Flora and Fauna aimed at determining priorities for future funding. Another initiative in the systematic arena was the setting up of a Council of Heads of Australian Entomology Collections (CHAEC). This was an initiative of lepidopterist, Ebbe Schmidt Nielson, who has recently taken over the position of Head of the Australian National Insect Collection at CSIRO in Canberra. Ebbe

recently went to the US to receive the prestigious Jordan Medal from the Lepidopterists Society.

Developments on the book publishing front in Australia have included the appearance of two long-awaited, comprehensive faunal studies. The first is Max Moulds' "Australian Cicadas", an illustrated guide to the whole fauna. It has just been awarded the Whitley Medal for the best natural history book for the year. And hot off the press is Ian Common's definitive "Moths of Australia" from Melbourne University Press. This illustrates more than 1000 species and gives a masterly summary of the classification and biology of the continent's fauna including a prodigious amount of new life history information from the author's own experience. The book was released at $125 and was almost immediately repriced by the publisher at $150. The good news is that the members of the Australian Entomological Society can get it at a special discount price of $93 until the end of October. This might be the cue for non-member New Zealanders to suddenly rekindle an Australian friendship.

Proofs of the completely re-written, 2- volume new edition of "Insects of Australia" have been returned to Melbourne University Press and we are hopeful of having it hot in the hand by Christmas. The price is expected to be announced as $225 - a perfect Christmas present!

World famous homopterist and retired Director of the Australian Museum, John Evans, died in Sydney on July 18th, just a few months after his moving autobiography "Insect Delight" was published by Brolga Press in Canberra. British by birth, John gained his early entomological tutelage under R. J. Tillyard at the Cawthron Institute in New Zealand (and later married Faith, one of Tillyard's daughters). He later served in distinguished entomological posts in Adelaide, Hobart and Britain before taking up the Australian Museum Directorship.

Geoff Monteith
Australian Correspondent

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THE ENTOMOLOGICAL SOCIETY OF NEW ZEALAND Inc.

The Entomological Society of New Zealand was formed in 1951 to provide a common meeting ground for everyone interested in entomology in New Zealand. The Society aims to stimulate interest, encourage amateurs, and promote the

profession of entomology by organising meetings, publishing information, awarding research grants and other activities. Membership is open to all.

Branches are established in Auckland and Otago.

Branches hold regular meetings throughout the year at which young people in particular are encouraged to pursue their entomological interests. Both branches organise collecting forays from time to time to local areas of entomological interest. The Society holds a conference each year in May, usually at a main centre, and alternating between the North and South Islands. The conference includes a symposium on a topic of current interest, as well as general papers, and provides a valuable opportunity for New Zealand for New Zealand Entomologists to meet and discuss problems and progress and to learn about entomological advances here and overseas.

The Society offers grants annually from its 21st Anniversary Research Fund to support entomological research, especially that carried out by amateurs. Further information and application forms are available from the secretary.

The Society has an important library of entomological literature housed with the DSIR Entomology Division Library at Mt Albert, Auckland and enquiries should be made to the Librarian, Entomological Society of New Zealand at that Institution.

The New Zealand Entomologist is published annually and is free to financial members, as are newsletters about Society activities. Contributions to publications are welcomed. Bulletins on specific topics are published from time to time.

The Society has also promoted a computerised information retrieval system for New Zealand Entomological literature which is regularly updated.

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BRANCH REPORTS

OTAGO SECTION

The field trip to Coronet Peak was a great success. Eight members spent from two to four days in luxurious accommodation at the Otago Ski Club lodge in early February in calm and very hot weather. Both Double Cone on the Remarkables and Coronet Peak were climbed by avid searchers of plants and insects. Results were both varied and spectacular. Pat Enright impressed Brian Patrick by finding flightless female moths and Malcolm Foord found *Prodontria capito* at Doolans Saddle in the Remarkables. Brian Patrick found 159 species of moths on Coronet Peak and topped it off with two new species at 2300 m on Double Cone.

Also found was our only scorpion fly on Coronet Peak, the beautiful pink winged moth *Meterana meyricci* and lots of species of caddis flies.

Besides the bugs, Brian Rance showed the group the rare plant *Kirkanella novaezelandiae* and Brian Patrick found a striped skink at 1500 m. Kees Green saw a Kaka in the Ratusburn while Malcolm saw a chukor on Coronet peak and some alpine black backed gulls nesting high on the Remarkables. All in all it was a fruitful and satisfying expedition for all the participants.

Another expedition involving three members ascended Mt Kyeburn near Naseby. Giant weevils, *Lyperobius*, giant wetas, 2 species, and spider wasps were found together with 30 odd species of moths, including the black butterfly. Grasshoppers and black cicadas were also collected.

Tony Harris has been collecting insects on the West Coast, Fiordland and Otago.

*

FAUNA OF NEW ZEALAND
No 19
MANTODEA
(Insecta)
With a review of aspects of
functional morphology and biology

G.W. Ramsay

This contribution to the Fauna of New Zealand series is now available from the DSIR.

PRE PUBLICATION ANNOUNCEMENT

BEETLES IN A SUBURBAN ENVIRONMENT: A NEW ZEALAND CASE STUDY

The identity and status of Coleoptera in the natural and modified habitats of Lynfield, Auckland (1974-1989)

G. Kuschel

Pre-publication announcement

This 118 page report is a pioneering effort for New Zealand, and a gem of its kind, the 12 pages of beetle illustrations alone will be worth the price, expected to be around $25-30. Advance orders are solicited, and can perhaps be placed through Branch Secretaries, so that a bulk purchase discount can be arranged for Entomological Society members. Publication is expected to be late 1990.

*

RESEARCH ON TERRESTRIAL INSECTS IN NEW ZEALAND

A 49 page publication of this title, the tenth and last in the Wildlife Research Liaison Group's (WRLG) research review series, is now available.

The work which was compiled by a committee comprising Dr G.W. Ramsay, Mr M.J. Meads, Dr G.H. Sherley and Dr G.W. Gibbs, is a review of our terrestrial and freshwater arthropod knowledge and research and should be particularly useful for entomologists concerned with conservation.

This work offers a list of research topics and five recommendations (reproduced below) which are aimed to provide data and the means for the management and survival of our arthropod fauna, especially the protected species. The work includes a substantial list of references and an annotated list of the protection species.

*

CONSERVATION OF NEW ZEALAND ARTHROPODS

The Entomological Society of New Zealand could facilitate the acquisition and provision of information, the recognition of research needs and priorities and research cooperation between the Department of Conservation, Entomology and Ecology Divisions, DSIR, universities and museums. The following are identified as urgent management needs:

1 Populations of each protected species should be established in suitable predator-free reserves. Taxa for which this is particularly urgent are the mainland populations of the giant wetas *Dianacrida heteracantha* and *D. parva*, and the Banks Peninsula beetles *Hadrampus tuberculatus* and *Megacolabus sculpturatus* if they are still extant. The ecosystem of Banks Peninsula is recognised as a threatened community and the assessment of reserve requirements there and the enhancement of suitable habitats for arthropods is a matter of urgency.

2 A central information base, perhaps within the Science and Research Directorate, Department of Conservation, should be established to facilitate the coordination of research and management on native arthropods and introduced species which threaten native fauna. It would provide information about protected and other important native arthropods, including data such as type locality information.

3 Captive colonies for each threatened species should be established where possible. for example, populations of some of the wetas should be established immediately.

4 A list of potentially dangerous insect species to agriculture and New Zealand's natural ecosystem, which are not yet established in New Zealand, should be compiled and kept in the Department of Conservation.

5 The welfare of the New Zealand arthropod fauna ultimately depends on the goodwill and support of the public which, in turn, will develop with education. An illustrated, informative book about the protected New Zealand arthropods, directed towards the lay public, could greatly improve public awareness and sympathy.

Copies of this report are available from:

Department of Conservation, P O Box 10-420, Wellington. Telephone (04)710-726.

Librarian, DSIR Land Resources, P O Box 30- 379, Lower Hutt. (04)694-859
Librarian, DSIR Mt Albert, Private Bag, Auckland. (09)893-660
Entomological Society of New Zealand, C/- Ricardo Palma, National Museum, P O Box 467, Wellington. Phone (04)859-609

Price in New Zealand: $12.00 includes GST, postage and packing.
Price overseas $US10 includes surface postage and packing.

Marlene Boyd and Graeme Ramsay
DSIR Plant Protection
Private Bag
AUCKLAND

*

WILDLIFE RESEARCH LIAISON GROUP

The Wild Life Research Liaison Group (WRLG) was formed in 1981 by the Minister of Science and Technology. Its objective was to promote wildlife research in New Zealand by encouraging communication between all organisations and individuals interested in wildlife and to review recent and current research.

The research reviews were carried out by sub-committees of experts on the basis of subjects and taxonomic groups, rather than on the work of research agencies. The reports include a summary of existing knowledge; a list of current projects; an evaluation of recent and current research, and suggestions for future work.

WRLG RESEARCH REVIEWS

1 Gamebird research in New Zealand
2 Research on amphibians and reptiles in New Zealand
3 Research on mustelids and cats in New Zealand
4 Research on rodents in New Zealand
5 Research on possums in New Zealand
6 Research on feral goats and sheep in New Zealand
7 Research on pinnipeds in New Zealand
8 Research on penguins in New Zealand
9 Research on land snails of New Zealand
10 Research on terrestrial insects of New Zealand

*

THE JAS K.H. GODFREY COLLECTION

The Botany and Zoology Department of Massey University was recently gifted an insect collection by the family of Jas K.H. Godfrey following his death on the 29th January 1981. This collection now bears his name and is contained in 34 entomological boxes and 111 glass fronted show cases. Most of the approximately 7000 specimens were collected from the Manawatu and Wellington regions over a period of 40 years. They are in good condition, the majority being medium to large Lepidoptera and Coleoptera with small representation s of Diptera, Hymenoptera, Orthoptera, Hemiptera, Odonata and a few others. Many specimens are duplicated and all are pinned except the Coleoptera which are carefully set out on cards.

Jim Godfrey was born on 13th September 1922, son of Dr and Mrs W.F. Godfrey of Palmerston North. He was an avid collector of insects and books for most of his life. His interest in insect collecting started as a young schoolboy, with encouragement from his family and from Dr Dry and Dr Tetley at the then Massey Agricultural College. Woodwork and cabinet-making was another interest developed at school and the boxes housing the collection were almost all made by himself.

Always based in Palmerston North, he spent much time in the field collecting and observing, while at home he lovingly reared many larger insects, including some of the more impressive members of his collection such as *Danaus chryssipus*. Many of his insects were collected on holiday with his family. His personal influence extended well beyond his immediate family. His enthusiastic support of schoolboy naturalists is gratefully acknowledged by his Nephew (I.G.A.) and, although sickness deprived him of a University education, he made up for this in his reading and his contacts with other entomologists in New Zealand and overseas.

Mr Godfrey married in 1951 and his wife was a great encouragement until her death. Jim Godfrey is survived by his two daughters, who made the generous gift of his collection to Massey University.

The collection is available for study by bone-fide entomologists on application to the Botany and Zoology Department.

I.G. Andrew
I.A.N. Stringer
(Massey University.

21ST ANNIVERSARY GRANTS
1990

1990 Grants were announced in the June Newsletter to members.

Research reports received during 1989 - 1990:

Dr A. C Eyles (1989 Grant)
The taxonomic revision of the genus *Rhypodes* has been completed and a paper is in press with the *NZ Journal of Zoology*. Twenty two new species of *Rhypodes*, a genus endemic to New Zealand have been described. This brings the total known species to 28.

Mr C.R. Jowett (1989 Grant)
Data collection is proceeding on potential predators of giant wetas. So far, it appears that all mammalian predators are a potential danger to giant wetas, particularly hedgehogs. Avian predators do not appear likely to be threat.

Mr W.L. Chadderton (1989 Grant)
Seventeen forested streams in Southland were surveyed and water samples, stream descriptions and invertebrate collections were made from each site. Invertebrate samples are still to be analysed and results will then be compared with Stewart Island and mainland faunal lists.

Mr R.J. Dearth (1989 Grant)
Sampling has been completed and results are being analysed.

Mrs O.R. Green (1989 Grant)
This grant was used as part payment for a Wild M3/M7 microscope drawing tube. It is now being used to produce drawings for Mrs Green's own papers and also for other authors.

Susan Millar
Secretary.

*

The Editor acknowledges and greatly appreciates the assistance of Mrs Dallas Bishop in the preparation of *THE WETA*.

DISPLAY BOX 10

EXHIBITS AT RECENT AUCKLAND BRANCH MEETINGS

25.10.88	
Entomological book catalogues	P.Patterson
Avondale spiders, *Isopeda insignis*	M.Raymond
Tamu Zoological Park Insectorium plans and article	G.Allen
24.11.88	
Insect collection from Murphys Bush, Otara, and round home, Auckland	B.Goldstone
Locusta migratoria and other Pacific orthoptera	P.Maddison
25.2.89	
32-week old Avondale spiders, 2 mated adults	M.Raymond
Banana spider, *Heteropoda venatoria*	G.Hall
Nurseryweb spider, Eumenidae *Ancistrocerus gazella*	O.Green
Malaise trap catch, Matuku Reserve	C.Green
Insect visitors to house over summer, moth from Marlborough, cicada from Chatham Is.	N.Payne
Witches Broom gorse mite from Auckland	G.Ramsay
Gum emperor cocoon, eggs, photo of moth	I.Thompson
Beetles and large weevil pest from Solomans	R.Pauku
New records for Solomons, carrion beetle in shark fins.	P.Maddison
'Mystery insects' for identification, greasy cutworm *Agrotis ipsilon* January infestation	A.Curson
23.3.89	
Golden orbweb *Nephila edulis*, red back spider *Latrodectus hasselti*	G.Hall/ O.Green
Photos: Pollen Island field trip	R.Sunde
Mildew feeding ladybird *Illeis galbula*	P.Patterson
Books: African Insect Life S.H.Skaife et.al.	G.Allen
The Secret Life of Insects P.Passarin d'Entreves et.al.	
27.4.89	
Miomantis caffra, *Orthodera ministralis* male, female ootheca, *Thysanoplusia orichalcea*	O.Green
Avondale spider, golden orbweb	G.Hall
Black Beetle *Heteronychus arator*	J.Bishop
Photo: cave wetas in a log	I.Thompson
Slide: *M.caffra* male feeding	P.Brennan
Moth collection from Matuku reserve	C.Green
Insect books from personal collection	G.Allen

New Zealand Entomological Collections

This is a list of entomological collections in New Zealand, their addresses, and curators. It was compiled by Trevor Crosby, DSIR Plant Protection, Auckland, from a circular and questionnaire sent to curators in July 1990 with the newsletter of the N.Z. Entomology Curators (*New Zealand Entomology Curators Update*, Number 1, July 1990).

AMNZ Auckland Institute and Museum. Mr Keith J. A. Wise

Postal address:	Private Bag, Auckland
Location:	Auckland Domain, Auckland
Telephone:	(09) 390 443
Fax:	(09) 799 956

CMNZ Canterbury Museum. Mr R. Anthony Savill

Postal address:	Rolleston Ave, Christchurch 1
Location:	Rolleston Ave, Christchurch 1
Telephone:	(03) 668 379
Fax:	(03) 668 379

FRNZ Forest Research Institute. Mr Mike J. Nuttall

Postal address:	Private Bag 3020, Rotorua
Location:	Sala Street, Rotorua
Telephone:	(073) 475 899
Fax:	(073) 479 380
Telex:	NZ21080
Electronic mail:	Overseas BITNET: Nuttallm%mof.govt.nz@uunet.uu.net Overseas INTERNET: Nuttallm@mof.govt.nz New Zealand use INTERNET or PACNET 73000000

ICNZ Invermay Agricultural Research Centre Collection. Dr Barbara I.P. Barratt

Postal address:	Private Bag, Mosgiel
Location:	Invermay Agricultural Research Centre, Mosgiel
Telephone:	(024) 893 809
Fax:	(024) 893 739

LCNZ Entomology Museum, Lincoln University. Mr John W. Early, Dr Rowan M. Emberson, Ms Carol Muir

Postal address:	Department of Entomology, P.O. Box 84, Lincoln University, Canterbury
Location:	Department of Entomology, Lincoln University
Telephone:	(03) 252 811
Fax:	(03) 252 944

LRNZ DSIR Land Resources, Invertebrate Reference Collection. Mr Mike J. Meads

Postal address: Private Bag, Lower Hutt
Location: Eastern Hutt Road, Taita
Telephone: (04) 673 119
Fax: (04) 673 114

MUNZ Department of Botany and Zoology, Massey University. Ms Liz A. Grant

Postal address: Massey University, Palmerston North
Location: Biology Building, Massey University, Palmerston North
Telephone: (063) 69 099
Fax: (063) 505 623

NMNZ National Museum of New Zealand. Mr Ron G. Ordish, Ms Pamela Lovis, Mr Ricardo L. Palma

Postal address: P.O. Box 467, Wellington
Location: Buckle Street, Wellington
Telephone: (04) 859 609
Fax: (04) 857 157

Northland Regional Museum, Fairburn Coleoptera Collection. Mr Bruce Young

Postal address: P.O. Box 1359, Whangarei
Location: State Highway 14, Maunu, Whangarei
Telephone: (089) 489 630

NZAC New Zealand Arthropod Collection. Dr Trevor K. Crosby (curator, small orders, lower Diptera), Mrs Grace Hall, Ms Jocelyn A. Berry (Hymenoptera), Dr Robin C. Craw (Coleoptera), Mr John S. Dugdale (Lepidoptera), Dr Beverley A. Holloway (higher Diptera), Dr Peter A. Maddison (Pacific), Dr Clare F. Morales (Hemiptera), Dr Graeme W. Ramsay (Acari, Orthoptera).

Postal address: DSIR Plant Protection, Private Bag, Auckland
Location: 120 Mt Albert Rd, Auckland
Telephone: (09) 893 660
Fax: (09) 893 330
Telex: NZ21623
Electronic mail: Overseas BITNET: srajtkc%akv.dsir.govt.nz@uunet.uu.net
Overseas INTERNET: srajtkc%akv.dsir.govt.nz
Overseas PACNET: 053014600000001
New Zealand use INTERNET or PACNET 4600000001

New Zealand Arthropod Collection, Palmerston North. Dr Peter G. McGregor

Postal address: DSIR Plant Protection, Private Bag, Palmerston North
Location: DSIR Research Centre, Fitzherbert West, Palmerston North
Telephone: (063) 68 019
Fax: (063) 61 130

New Zealand Arthropod Collection, Lincoln. Dr Rod P. Macfarlane

Postal address: DSIR Plant Protection, Private Bag, Lincoln
Location: Canterbury Agriculture and Science Centre, Ellesmere Junction Road, Lincoln
Telephone: (03) 252 511

OMNZ Otago Museum. Mr Anthony A. Harris

Postal address: Great King Street, Dunedin
Location: Great King Street, Dunedin
Telephone: (024) 772 372

PANZ Plant Protection Centre, Auckland. Mrs Olwyn R. Green

Postal address: Plant Protection Centre, MAF, P.O. Box 41, Auckland 1
Location: 131 Boundary Road, Lynfield, Auckland
Telephone: (09) 676 026
Fax: (09) 627 9750

PCNZ Plant Protection Centre, Lincoln. Mrs Lindsay Hawke, Mr Maurice O'Donnell

Postal address: MAF Quality Management, P.O. Box 24, Lincoln
Location: Canterbury Agriculture and Science Centre, Ellesmere Junction Road, Lincoln
Telephone: (03) 253 011
Fax: (03) 252 946

UCNZ University of Canterbury, Zoology Department. Mr Peter M. Johns

Postal address: Private Bag, Christchurch
Location: Zoology Department, University of Canterbury, Creyke Road, Christchurch
Telephone: (03) 642 059
Fax: (03) 642 999

Private collections. These collections are usually available for inspection, at times prearranged with the owners. In special cases, some specimens may be available for research for a limited period.

Andrew, Dr Ian G. 6 Eton Place, Palmerston North. (063) 81 183; work (063) 69 099

Barratt, Dr Barbara I. P. (**BBNZ**) 87 Formby Street, Outram. (024) 20 647

Chambers, Mr Frank D. Namu Road, Opunake, Taranaki.

Davies, Mr Tom H. 84 Beach Road, Haumoana, Hawkes Bay. (074) 750 681

Esson, Mr Jim 60 Batt Street, Palmerston North. (063) 65 361; work (063) 61 911, fax (063) 85 329. Hemiptera: Cicadidae

Gibbs, Mr Denis 19 Beech Crescent, Hamilton. (071) 63 348; work (071) 386 699, fax (071) 386 599. Spiders

Green, Dr Chris J. (**CGNZ**) 40 Preston Avenue, Henderson, Auckland 8. (09) 838 5888. Mainly Lepidoptera and Coleoptera

Hornabrook, Dr R. (Dick) W. 27 Orchard Street, Wadestown, Wellington. (04) 735 320. Coleoptera

Lyford, Mr Brian 67 Wynyard Crescent, Fernhill, Queenstown. (03) 442 6189. Lepidoptera

Meads, Mr Mike J. c/- DSIR Land Resources, Private Bag, Lower Hutt. Work (04) 673 119, fax (04) 673 114. Mainly exotic Coleoptera and Lepidoptera.

Nunn, Mr John T. 9 Jackson Street, Wellington 2. N.Z. and exotic Carabidae, N.Z. Curculionidae, N.Z. Pselaphidae

Patrick, Mr Brian H. (**BPNZ**) Box 5244, Dunedin. 38 St Albans Street, Dunedin. (024) 770 677 or 534 002, fax (024) 778 626. Lepidoptera

Quinn, Mr Pat J. P.O. Box 5, Lake Tekapo, South Canterbury

Townsend, Mr J. Ian 30b The Avenue, Levin. (069) 88 409

Overseas contacts

Horning, Dr D.S. (Woody) Jr Invertebrate Unit, Macleay Museum (MAMU)

Postal address:	Macleay Museum A 12, University of Sydney 2006, New South Wales, Australia
Location:	Badham Building Basement, Room 111
Telephone:	(0061) (2) 692 3538
Fax:	(0061) (2) 692 4203

Nishida, Mr Gordon M. J. Linsley Gressitt Center for Research in Entomology, Bishop Museum

Postal address:	P.O. Box 19000-A, Honolulu, HI 96817, U.S.A.
Location:	Bernice P. Bishop Museum, 1525 Bernice Street, Honolulu, Hawaii
Telephone:	(001) (808) 848 4196
Fax:	(001) (808) 841 8968

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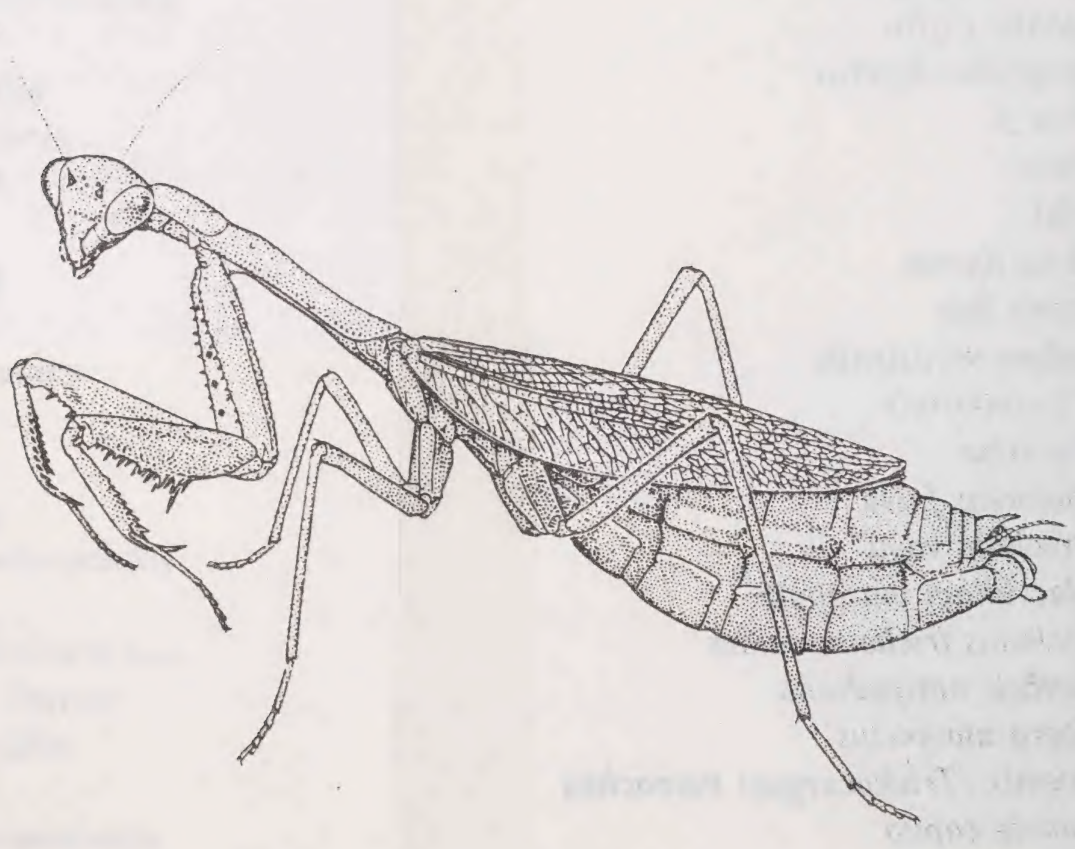

J.D. Tenquist, Editor
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NOTICE TO CONTRIBUTORS

The 'Weta' is a scientific supplement. Editing is kept to a minimum and authors are responsible for the accuracy of their statements. Manuscripts, where possible should be typed double-spaced, on Standard A4 paper, and on one side of the page only.

Authors with access to typing services are requested to supply manuscripts single spaced on A4 paper, using a typeface with ten characters to the inch.

High contrast black and white photos or penned line drawings are acceptable.

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